

Remarks

Before entrance of the present Amendment, claims 1-5, 7-11, 13-19, 22-25, 27-34, 36-44, 47-50, and 59-74 were pending in the present application. Claims 6, 12, 20, 21, 26, 35, 45, 46, and 51-58 have been canceled previously. Claims 59-70 have been previously withdrawn from consideration by the Examiner. Thus, claims 1-5, 7-11, 13-19, 22-25, 27-34, 36-44, 47-50, and 71-74 are currently pending and stand rejected by the Examiner.

Claims 72 and 74 have been amended to remove “substantially”, and no new claims have been added. Applicant submits that no new matter is added to the application by the above Amendment.

Applicant respectfully requests reexamination and reconsideration of the case based on the amended claims. Each of the rejections levied in the Office Action is addressed individually below to the extent it relates to the amended claims.

I. Rejection under 35 U.S.C. § 102(a), as being anticipated by Levenberg *et al.* (PNAS, 99 (7): 4391-4396, 2002).

Claims 1-5, 7-11, 13-19 and 22 have been rejected under 35 U.S.C. § 102(a) as being anticipated by Levenberg *et al.*, PNAS, 99 (7): 4391-4396, 2002. In order to remove Levenberg *et al.* as a § 102(a) reference, Applicant submits herewith a Declaration under 37 C.F.R. § 1.132 showing that the claimed subject matter was, in fact, not invented by another. Declarant, Professor Robert S. Langer, in paragraphs 4 and 5 of the Declaration states that “Shulamit Levenberg, Ngan F. Huang, Erin Lavik, Joseph Itskovitz-Eldor and I are the co-inventors on the above-referenced application. Levenberg, Itskovitz-Eldor and I are also co-authors of the Levenberg PNAS reference (2002). Justin S. Golub and Michal Amit are the other co-authors of the Levenberg PNAS reference (2002). However, Golub and Amit are not inventors of the claimed invention in the above-referenced patent application because they did not make an inventive contribution to the claimed invention.” Applicant therefore requests that the rejection be withdrawn.

II. Rejection under 35 U.S.C. § 103(a), as being unpatentable over Levenberg et al. in view of Benvenisty et al. (US 2002/0146678).

Claims 1-5, 7-11, 13-19, 22-25, 27-34, 36-44 and 47-50 have been rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Levenberg et al. in view of Benvenisty et al. (US 2002/0146678). The Examiner maintains that Levenberg et al. differs from the claimed invention for not teaching exposing the embryonic stem cells to activin A, and Benvenisty et al. teaches exposing embryonic stem cells to activin A. The Examiner, therefore, concludes that the claimed invention as a whole is clearly *prima facie* obvious. Applicant disagrees because Levenberg et al. is not prior art citable against the present application as discussed above. Benvenisty et al. alone does not teach or suggest any three-dimensional tissue engineering constructs so the Examiner has not established a *prima facie* case of obviousness. Applicant requests that the rejection be removed.

III. Rejection under 35 U.S.C. § 103(a), as being unpatentable over Levenberg et al. in view of Benvenisty et al. and Kojima et al. (Experimental Cell Research, 206(2): 152-156, 1993).

Claims 71-74 have been rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Levenberg et al. in view of Benvenisty et al. and Kojima et al. (Experimental Cell Research, 206(2): 152-156, 1993). Again, Levenberg et al. is not prior art citable against the present application based on the Declaration submitted herewith. Benvenisty et al. and Kojima et al., either alone or in combination, do not disclose three-dimensional tissue engineering constructs as claimed in the present application. Therefore, the Examiner has not established a *prima facie* case of obviousness. Applicant respectfully requests that the rejection be removed.

IV. Rejection under 35 U.S.C. § 112, second paragraph

Claims 72 and 74 have been amended to remove “substantially”. Without agreeing with the Examiner, Applicant has amended the claims rendering the Examiner’s rejection moot.

In view of the forgoing arguments, Applicant respectfully submits that the present case is now in condition for allowance. A Notice to that effect is requested.

Please charge any fees that may be required for the processing of this Response, or credit any overpayments, to our Deposit Account No. 03-1721.

Respectfully submitted,

/C. Hunter Baker/

C. Hunter Baker, M.D., Ph.D., J.D.

Registration Number: 46,533

Choate, Hall & Stewart LLP
Two International Place
Boston, MA 02110
t (617) 248-5215
f (617) 502-5002
chb@choate.com
Date: April 2, 2009